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# Data collection by ANRC Romania

## Background paper – ITU's World Telecommunications ICT Indicators Meeting, Geneva, February 2005

The National Regulatory Authority for Communications (ANRC), the institution to implement the national policy in the field of electronic communications and postal services, has become operational since September 25, 2002.

## ANRC Missions and Objectives

In its activity ANRC aims to accomplish **two major objectives:** promoting competition and the best interests of the end users.

In the context of the complete liberalization of the electronic communications and postal services market, **promoting competition** represents a high priority objective. Competition will act as an incentive for the development of investments and improvement of the market players' efficiency, ensuring the appearance of new technologies, as well as lower tariffs. In order to promote competition, ANRC acts in the following directions:

- Prevent the actions leading to the distortion or restraint of the competition in the electronic communications market;
- Stimulate efficient investments in the infrastructure and promote innovation;
- Promote technological neutrality.

**Promoting the interests of end users** represents a highly important objective, and for this reason ANRC focuses on the following directions for action:

- Grant Romanian citizens the right of access to Universal Service;
- Ensure the protection of consumers' interests in their relation with the providers, especially by making available a transparent, impartial, simple and free of charge dispute mediation procedure;
- Get involved in protecting the rights of persons, especially the right to privacy, as regards the processing of personal data;
- Promote transparency towards the users by keeping them appropriately informed about tariffs and the other conditions related to the use of publicly available services;
- Promote the specific interests of the users with disabilities or special needs;
- Protect the integrity and security of the electronic communications networks.

## Market analysis process - data collection, sources of information, methods used.

In Romania, depending on the scope, market data collection process has included the following phases:

First round of data collection was carried out during 22 February 2003 - 24 March 2003; questionnaires were sent to a number of 494 providers of electronic communication services, requesting quantitative and qualitative data at wholesale level, *in order to define the relevant wholesale markets*. Problems come up from this process were related to definitions of services, pressure of time and not all data could be spitted or supplied by all operators, so we had to send again some additional questions and clarification and to delay with two weeks the submitting date the in order to obtain accurate data.

For defining the relevant retail markets, analyzing and identifying the SMP operators on these markets, ANRC also sent questionnaires to the most significant operators, in February 2004, requesting qualitative data. They were given 30 days to complete or to get accustomed to the information requested and, then, to set a face to face meeting with ANRC representatives. So, in addition, ANRC had face to face discussions with operators on the questionnaire's topics to ensure clarification of definitions or data and to overcome concerns for the reliability of the submitted data.

For a demand-side analysis, ANRC also commissioned market research studies on residential and business users in order to complete the data received from suppliers.

The studies were carried out by a specialized company, who won the tender organized by ANRC by the end of 2003.

Six market studies, both qualitative and quantitative, were conducted between February- March, 2004:
– Study regarding the use of fixed telephony and the impact of mobile telephony on fixed telephony, as regards the users – residential (a qualitative study conducted on 12 focus-groups from Bucharest and the province and a quantitative study on a pattern of 1000 persons at a national level)
– Study regarding the use of fixed telephony and the impact of mobile telephony on fixed telephony, as regards the users – business (a quantitative study conducted on a pattern of 600 companies)
– Study regarding the use of Internet, as regards the users – residential (quantitative study on 1000 persons)
– Study regarding the use of Internet, as regards the users – business (quantitative study on 600 companies)

– Study regarding the use of leased lines services by end users, as regards the users – business (quantitative study conducted on a pattern of 150 companies)

On grounds of these studies and analyses, ANRC obtained information as basis for analyzing the substitutability and geographical limits of the relevant retail markets, for evaluating markets' capacity to function based on competitive mechanisms, and for identifying the possible obstacles in the establishment of a normal competitive environment on the retail markets. Based on the results, ANRC identified the relevant retail markets and analyzed them in order to determine the existence of operators with significant power.

## Statistical data collection – a half yearly report

Beginning with January 2004, ANRC collects statistical information twice a year from operators based on **ANRC President's Decision no.1332/2003** on **reporting statistical data by the providers of electronic communications networks and services**.

The objective of this decision is to impose on the providers of electronic communications networks or services the obligation to send statistical data, on a regular basis, to the National Regulatory Authority for Communications with a view to elaborating reports, studies, analyses and other such documents in the field of electronic communications services, as well as with a view to monitoring and controlling the enforcement of the provisions of the legal regulations in force.

After processing all the data received from the operators for the last half of the year 2004, a full report is to be published on ANRC website.

Since now, ANRC collected data for year 2003 and for the first semester of year 2004. For the second half of 2004 we are now in the process of collecting and verifying data from the operators.

As there are over one thousand operators to report the statistical data, the process of collecting has become more efficient by involving all the ANRC Regional Offices in gathering and helping the operators to fill up the questionnaires. Before processing the data, the questionnaires are double checked by the ANRC Headquarters' team.

Samples of annexes from **ANRC President's Decision no.1332/2003** on reporting statistical data by the providers of electronic communications networks and services can be viewed at **http://www.anrc.ro/acte_emise_en**

# APPENDIX A

## BRIEF DESCRIPTION

## ROMANIAN ELECTRONIC COMMUNICATIONS MARKET - MAIN SECTORS

*Based on the statistical data reported by the providers electronic communications networks and services for the first semester of 2004*

## 1. The electronic communications market

After two years from the full liberalization of the electronic communications market in Romania, the number of providers of electronic communications networks and services on the market witnessed considerable growth. Thus, after the first 6 months of 2004, a number of 2219 companies had the right to provide electronic communications networks or services. By the end of the first semester of 2004, 1139 providers operated on the electronic communications market and provided the following services:

Table 1

| Services | *Active* providers on the electronic communications market on **December 31st, 2003** | *Active* providers on the electronic communications market on **June 30th, 2003** |
|---|---|---|
| Fixed telephony services | | |
| - local and distance calls | 13 | 17 |
| - fixed-to-mobile calls | 8 | 14 |
| - international calls | 29 | 40 |
| Mobile telephony services | 4 | 4 |
| Internet access services | | |
| - dial-up access | 145 | 166 |
| - co-axial cable access | 56 | 68 |
| - fiber optic access | 52 | 72 |
| - radio access | 121 | 170 |
| - xDSL access | 65 | 78 |
| - access through other means | 124 | 226 |
| Leased lines services | 15 | 15 |
| Services of audio-visual program re-transmission | 504 | 573 |

*Source: ANRC, according to the statistical data reported by the providers of fixed telephony services based on the ANRC President's Decision no.1332/2003*

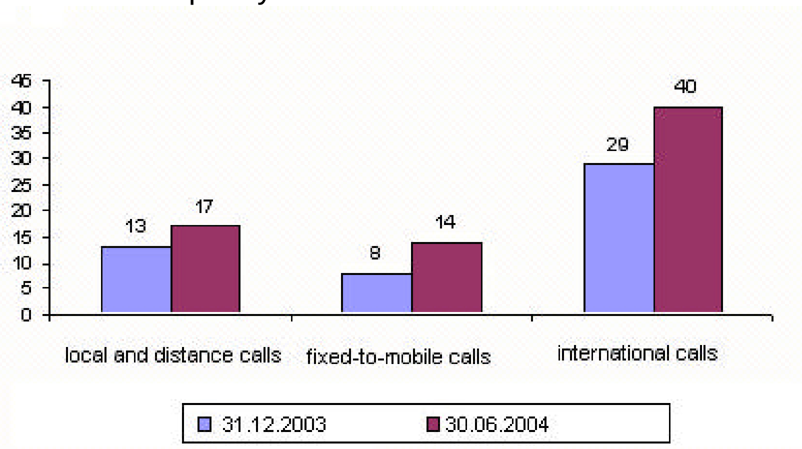
## 2. Fixed telephony sector

### 2.1. Authorized providers

By the end of the first semester of 2004, there were 1169 companies authorized to provide fixed public networks of electronic communications and 183 companies authorized to provide telephony services by means of fixed public networks, of which 50 companies actually provide telephony services – 20 companies, by means of their own networks and 32 companies by means of other persons' access networks.

As one can see in the chart below, most of the companies on the market of telephony services provided by means of fixed public networks (40) offered international call services, 17 companies offered local and distance call services, while 14 companies offered services of calls at a fixed location to the mobile public telephony networks.

Chart 2 Number of active providers on December 31st, 2003 and June 30th, 2004 on categories of fixed telephony services




*Source: ANRC, according to the statistical data reported by the providers of fixed telephony services based on the ANRC President's Decision no.1332/2003*

## 2.2. Number of subscribers. Penetration rate. Traffic in the fixed public telephony networks in Romania

The number of fixed telephony subscribers increased slowly by 7.7% in the period December 2002 - June 2004.

Table 3 Penetration rate per 100 inhabitants/ digitalization level of fixed telephony

| | December 31st, 2002 | December 31st, 2003 | June 30th, 2004 |
|---|---|---|---|
| Penetration rate of fixed telephony per 100 inhabitants | 19.43% | 19.98% | 20.94% |
| Digitalization level of fixed telephony | 71.90% | 74.27% | 76.46% |

*Source: ANRC, according to the statistical data reported by the providers of fixed telephony services based on the ANRC President's Decision no.1332/2003*

At the same time, the upward trend of the fixed telephony penetration rate registered in the last years persists: the fixed telephony penetration rate, related to the population of Romania reached, on June 30th, 2004, the value of 20.94% as compared to 19.43% in 2002.

Significant growth is registered in the digitalization „chapter": by the end of the first semester of 2004, the rate of subscribers with telephone sets connected to digital exchanges was 76.46%, as compared to 71.90%, in January 2003.

As presented in the table below, in the first half of 2004, the total traffic originated in the fixed public telephony networks in Romania registered a value of 5,750.4 million minutes, representing 47.06% of the total traffic of 2003.

Table 4 Traffic of minutes originated in the fixed public telephony networks in Romania *(2003 – June 2004)*

| | 2003 (million minutes) | First half of 2004 (million minutes) |
|---|---|---|
| Total traffic (voice + Internet SIA) | 12.220 | 5.750,4 |
| Voice traffic | 8.976 | 4.496 |
| National traffic | 7.974 | 3.984 |
| Fixed-to-mobile traffic | 818 | 393 |
| Originated international traffic | 184 | 118 |
| Internet (SIA) traffic | 3.244 | 1.255 |

*Source: ANRC, according to the statistical data reported by the providers of fixed telephony services based on the ANRC President's Decision no.1332/2003*

As concerns voice traffic, international traffic originated registered significant growth (on June 30, 2004 this growth represented 64% of the total traffic in 2003). The same trend is registered in case of traffic originated in the fixed public telephony networks towards other fixed public telephony networks, as it doubled in the first half of 2004 compared to the end of 2003, which represented a consequence of the rise of numerous alternative providers, whose diversified offer, including integrated services, stimulate the use of electronic communications services.

The situation changes in case of traffic for Special Internet Access. Thus, the number of minutes originated in the first half of 2004 decreased, mostly as a result of the users' shift from dial-up connections to dedicated connections.

## 2.3. The alternative offer of electronic communications services after 2 years from liberalization

After two years from the full liberalization of the electronic communications market one can actually choose from alternative offers of fixed telephony services, apart from the former monopoly provider. By the end of June 2004 there were 49 active alternative providers on the market, as compared to 36 active providers at the end of 2003. According to the call category provided, 16 operators actually provided distance call services, 13 – fixed-to-mobile calls, and 39 – international calls.

Table 5 Number of alternative providers of fixed telephony services, on call categories provided

| Calls | Alternative providers | |
|---|---|---|
| | **December 31st, 2003** | **June 30th, 2004** |
| National and local calls | 12 | 16 |
| Fixed-to-mobile calls | 7 | 13 |
| International calls | 28 | 39 |

*Source: ANRC, according to the statistical data reported by the providers of fixed telephony services based on the ANRC President's Decision no.1332/2003*

Despite the fact that the global trend is stagnating, Romania is expected to report a steady growth of the fixed telephony sector. A proof therefore is the fact that the former monopoly provider registered an increase of the subscriber number, while the number of subscribers of the alternative provides doubled by the end of the first half of 2004, reaching 21,659.

Table 6 Minutes traffic realized on the types of calls offered by the alternative providers in 2003 and in the first half of 2004

| Traffic / period | Alternative provider traffic | | Total traffic | |
|---|---|---|---|---|
| | 2003 (million minutes) | 1st half of 2004 (million minutes) | 2003 (million minutes) | 1st half of 2004 (million minutes) |
| National traffic | 23.8 | 24.6 | 7,974 | 3,984 |
| Fixed-to-mobile traffic | 9.6 | 6.8 | 818 | 393 |
| International traffic | 39.4 | 41.8 | 184 | 118 |

*Source: ANRC, according to the statistical data reported by the providers of fixed telephony services based on the ANRC President's Decision no.1332/2003*

As well, in the first half of 2004, the traffic realized by the alternative providers of alternative providers of fixed telephony services represents 1.63% of the total voice traffic, as the alternative offers have a significant impact on the market of international calls at fixed locations. Thus, on June 30, 2004, the market share registered by the alternative providers on this market segment was 35.5%, and the tariffs charged for international calls, dropped, on average, by up to 60%.

## 3. The Mobile Telephony Sector

### 3.1. Overview

The value of the market of telephony services provided through mobile public networks amounted to more than EUR550 million in the first quarter of 2004, while the value of total investments over the same period (including the investments in buildings and land) amounts to more than EUR71 million[1].

On November 15, 2004, 71 companies were authorized to provide telephony services through mobile public networks, four of which eventually provided these services, by means of all the important technology types. Moreover, starting with 2004, S.C. Mobifon S.A. and S.C. Orange Romania S.A. were granted the licenses required for the provision of third generation mobile telephony services (3G).

Table 7 Coverage of mobile public telephony networks

| Provider | Coverage - territory - | Coverage - population - |
|---|---|---|
| S.C. Mobifon S.A. | 73.92% | 93.61% |
| S.C. Orange Romania S.A. | 79.18% | 96.19% |
| S.C. Telemobil S.A. | 58.00% | 78.00% |
| S.C. Cosmorom S.A. | 39.01% | 60.34% |

*Source: ANRC, according to the statistical data reported by the providers of mobile telephony services based on the ANRC President's Decision no.1332/2003*

In the first quarter of 2004, the number of users of services provided through mobile public networks and the network coverage registered significant growth. The penetration rate of mobile telephony in Romania reached 38.56% by the end of June 2004.

[1] According to the statistical data reported by the providers of fixed telephony services based on the ANRC President's Decision no.1332/2003.

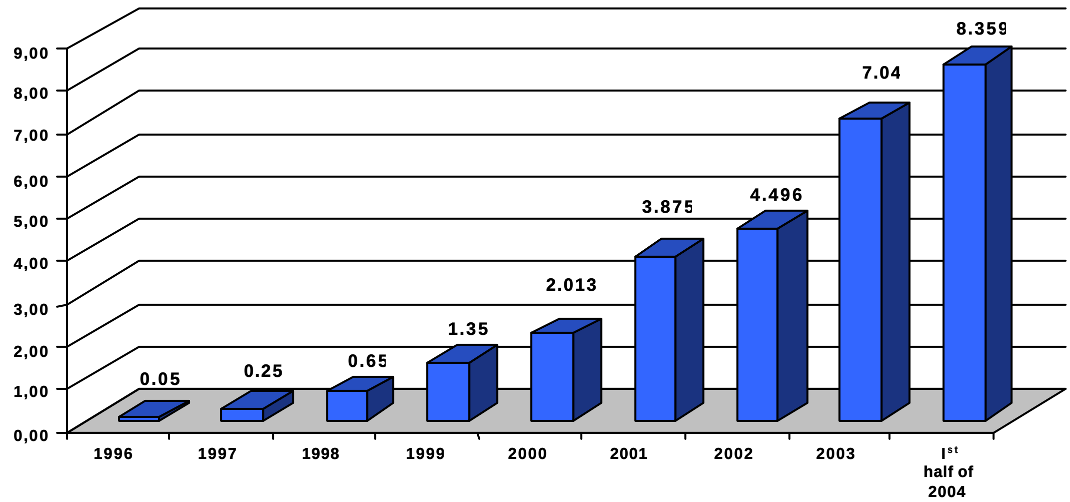
### 3.2. Authorized providers. Number of users. Volume of the traffic realized through mobile public telephony networks in Romania.

As we mentioned before, in the first half of 2004, all the providers of telephony services provides through mobile public networks registered growing numbers of users.

According to the statistical data reported to ANRC by the providers of telephony services through mobile public networks, the total number of users, as of June, 30th, 2004, reached 8,359,240 (of which 36.96% paid monthly subscriptions, and 63.04% use prepaid cards), i.e. an increase by more than 18% as compared to the end of 2003. Therefore, in the first half of 2004, Romania registered an increase of the mobile telephony penetration rate, per country population, by 18.75% as compared to 2003.

Regarding the distribution of the users on used services – upon payment of a monthly subscription and based on prepaid cards, the rate of subscribers dropped by approximately 2% as compared to 2003, while the rate of prepay card users increased. This is due mainly to the lower expenses registered by the prepaid card users.

Chart 8 Evolution of the number of users (millions) of telephony services provided through mobile public networks (1996 – June 30th, 2004)




*Source: ANRC, according to the statistical data reported by the providers of mobile telephony services based on the ANRC President's Decision no.1332/2003*

Regarding the offers of the operators of telephony services provided through mobile public networks, there is a diversified range of services, and the demand for all types of the services in the offer increased: voice services, SMS, MMS, data services.

Thus, according to the same statistical data for the first half of 2004, both the voice traffic, and the number of SMS and MMS sent in the first half of 2004, register comparable values with the ones realized in the whole year of 2003. Thus, only during the first half of 2004, voice traffic, including roaming, is 65.5% of the total traffic of the whole year of 2003, while the number of SMS represents 94.3% of the number of SMS sent in 2003, while MMS tripled as compared to 2003. As well, the number of users of the data services provided through mobile public networks, in the first half of 2004, increased by 68.34% as compared to the number of users of such services in 2003.

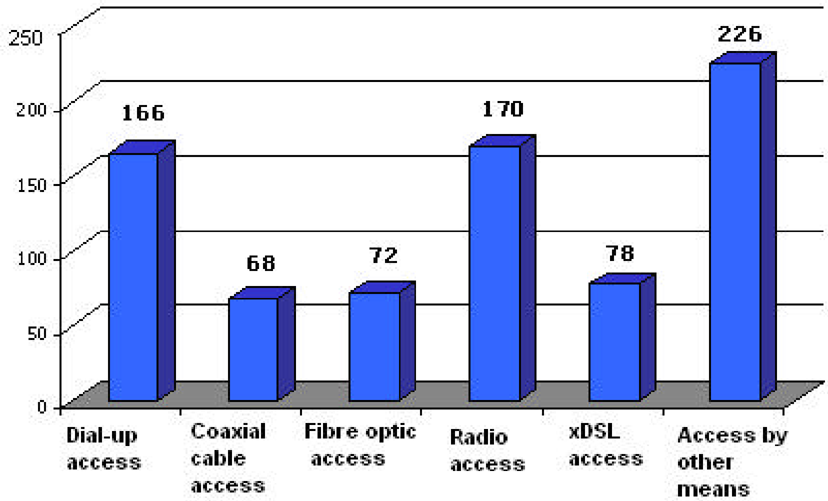
## 4. Internet access services

### 4.1. Internet access

At the end of December 2004, there were 660 companies authorized to provide Internet access services. On June 30, 2004, the providers on the electronic communications market offered Internet access services as follows:

- dial-up access: 166 providers;
- coaxial cable providers: 68 providers;
- fiber optic access: 72 providers;
- radio access: 170 providers;
- xDSL access: 78 providers;
- access by other means: 226 providers.

Chart 9 Number of providers offering Internet access services as of June 30, 2004, itemized by support




*Source: ANRC, according to the statistical data reported by the providers of electronic communications and services based on the ANRC President's Decision no.1332/2003*

In comparison with the year 2003, in the first half of 2004, the rate of the users of Internet access services in Romania increased.

Thus, on June 30, 2004, the number of Internet access connections registered an important growth, by 51.48%[2], as compared to the number of Internet access connections at the end of 2003.

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[2] The number of dial-up connections at fixed locations does not include the connections realized through limited and unlimited Internet access prepaid cards, and the Internet access connections using "Premium Rate" access numbers from Romtelecom (incumbent operator).

From the total Internet access connections, more than 45% are dial-up connections, at fixed and mobile locations. The users of such services may use free or paid accounts, depending on the providers' offers. Concerning paid accounts, Internet access may be realized by means of unlimited access subscriptions, prepaid cards, subscriptions with partially limited access and payment of additional hours and limited Internet access subscriptions.

Concerning the bandwidth used, on June $30^{th}$, 2004, as compared to the end of 2003, broadband Internet access connections registered a rapidly growing trend (by more than 26%) than the narrowband Internet access connections (increased by 23.85%). Thus, the rate of broadband Internet access connections out of the total number of Internet connections represented, on June 30, 2004, 21.88%.

As well, by the end of the first half of 2004, the number of dedicated Internet access connections witnessed a significant growth, by 78.97%, as compared to December $31^{st}$, 2003, considering all the supports used for ensuring the Internet access connection.